Chlamydia screening

Chlamydia screening in the United Kingdom

M Catchpole, A Robinson, A Temple

Four years on

It is now 6 years since the randomised controlled trial by Scholes *et al* demonstrated that a significant reduction in the incidence of pelvic inflammatory disease could be achieved through active case finding[1] and management of genital chlamydial infection among women. It is 4 years since the publication of the report of the chief medical officer of England's expert advisory group on *Chlamydia trachomatis*,[2] which concluded that "the evidence supports opportunistic screening of sexually active women aged under 25 years, especially teenagers," and over 2 years since the Scottish Intercollegiate Guidelines Network recommended that "opportunistic testing could be considered for women younger than 25 years and sexually active."[3] Expert opinion in the United States is also in favour of screening for genital chlamydial infection, with a recommendation in the 2002 sexually transmitted diseases treatment guidelines that "Sexually active adolescent women should be screened for chlamydial infection at least annually, even if symptoms are not present. Annual screening of all sexually active women aged 20–25 years is also recommended, as is screening of older women with risk factors."[4]

In the United States the CDC guidelines have been translated into action, with screening for genital chlamydial infection implemented across all states, with well documented evidence of the effectiveness of large scale screening programmes in reducing chlamydia prevalence in areas where this intervention has been in place for several years.[5] Similarly, a national programme of active case finding, or screening, for genital chlamydial infection in Sweden has been associated with dramatic reductions in the incidence of that infection and its sequelae.[6]

Against this background the first pilot of opportunistic screening of sexually active young women in the United Kingdom (published in this issue of *STI*),[7 8] has shown that screening is feasible and acceptable, achieving high levels of population coverage. So are we now closer to a national programme of screening for genital chlamydial infection in the United Kingdom? The consultation paper on the government's national sexual health and HIV strategy for England included a commitment to roll out national screening for chlamydia from 2002, although it was suggested that this would be limited to selected groups of young women in the first instance.[9] The recently published implementation action plan for the sexual health and HIV strategy[10] confirms funding for screening in 10 sites in England, although the invitation to tender to become one of these sites did note that "screening may not be rolled out in general medical services/general practice in the first instance due to logistical issues that need to be addressed."[11] This represents a move in the right direction but falls short of a national roll out of screening among the target group identified by the chief medical officer's expert advisory group and addressed in the pilot study.

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The national strategy implementation plan states that a UK national programme will be implemented after experts have assessed the results of the pilot screening programme as well as other relevant evidence. When the expert advisory group made its recommendations 4 years ago, there were important unanswered questions. But now that we have evidence from the pilot that the opportunistic approach is both feasible and acceptable, and more importantly will reach the target population, what further evidence is required before introducing national screening for all at-risk groups?

The most important issue that remains is deciding who should be screened, based on a reassessment of the costs and benefits of screening. The results of the pilot study will refine the economic model used to inform the deliberations of the CMO's expert advisory group, and results from the ongoing HTA funded chlamydia screening studies (ClaSS) and the Department of Health funded incidence/reinfection study will allow further refinements, including important information on reinfection rates. The high prevalence of infection found in both Portsmouth and Wirral suggests that the cost-benefit of universal screening of sexually active under 25 year olds is likely to be favourable, although a significantly lower prevalence was reported in the second national study of sexual attitudes and lifestyles.[12] This may reflect a different age structure of those sampled, but it will be important that the second wave of screening sites is used to validate the high prevalence rates reported in the pilot. It will be unfortunate if general practice is not included for this important reason.

Another important determinant of the cost-benefit analysis will be the offer of screening to men, where the evidence for effectiveness is currently lacking. The UK policy on this remains unclear; the implementation action plan for England aims to promote greater uptake of testing among men, but stops short of advocating formal screening. There is an urgent need to demonstrate that sufficient numbers of males, particularly those at highest risk of chlamydial infection, can be reached by, and will accept, offers of screening. It is argued that screening males is necessary because partner notification is presently not sufficiently effective, but it needs to be shown that the offer of screening to males will be any more effective. Whether or not screening of males is introduced, the high prevalence of infection in partners of screen positive women indicates that effective partner notification will remain an essential component of any chlamydial control programme.

A critical piece of information required to inform a re-evaluation of the cost-benefit of screening within the United Kingdom is the cost of screening attenders outside specialist services such as genitourinary medicine clinics and family planning clinics. Concerns about the possible cost of implementing screening in general practice may in part lie behind the Department of Health's reference to the need to address "logistical issues" surrounding screening in general medical services and general practice. Mainstreaming prevention and sexual health service provision, including chlamydia screening, in primary care settings is a central plank of the sexual health and HIV strategy in England. Achieving the mainstreaming of chlamydia screening at a cost that will ensure that the programme is cost effective is likely to be one of the first significant tests of the feasibility of not only opportunistic chlamydia screening, but also the strategy's implementation action plan in general. No one should underestimate the challenge of introducing a new screening programme into primary care, which in the United Kingdom mainly practises reactive care. Primary

care in the United Kingdom is currently grappling with the implementation of a series of national service frameworks covering, among others, coronary heart disease, cancers, and older people. There is concern that the sexual health and HIV strategy in England does not have the same status as the national service frameworks, and may therefore be seen as "optional," particularly as general practitioners may offer different levels of services under the proposed new general practice contract.[13]

Last, but not least, is the issue of what the long term benefits of screening will be. Since the natural history of untreated asymptomatic genital chlamydial infection is not known, and is not amenable to ethical study in humans, we have to assume that it is not significantly different from that of untreated symptomatic infection. What we do know is that studies of women with laparoscopically proved pelvic inflammatory disease (PID) have found evidence of *Chlamydia trachomatis* infection in 14%-65%, with studies in the United Kingdom most commonly reporting a detection rate of around 40% in such women.[14] Although these retrospective studies cannot prove causality, it seems reasonable to assume that many of the *C trachomatis* infections contributed to the tubal damage. It has also been reported that about 20% of women referred to infertility clinics have tubal damage that is thought to be due to infection, the most common aetiology of which is likely to be *C trachomatis*.[15] There is also the possibility that reducing the incidence of genital chlamydial infection will have a beneficial effect on rates of genital tract neoplasia.[16]

With the publication of the results of the first pilot of opportunistic screening for genital chlamydial infection, together with the demonstration of effectiveness of screening from other countries, we now have sufficient evidence to be confident that the opportunistic approach to screening is acceptable and feasible, and will result in a reduction in the prevalence of chlamydial infection. Further information is needed which will inform the costs and benefits of national screening. However, it is important at this stage that the roll out to further pilot sites includes screening in the primary care setting and general practice in particular. If roll out in these, or other settings, needs further discussion between policy makers and health professionals it must happen soon or else the major advantage of the UK approach to opportunistic screening will be jeopardised.

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Screening

Spending money to save money

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Cost effectiveness analysis to advocate *Chlamydia trachomatis* screening

In the December issue of *STI*, Honey *et al* summarise and critically review studies of cost effectiveness analysis (CEA) of *Chlamydia trachomatis* screening to provide recommendations for future screening studies.[1] The authors conclude that screening is cost effective because future sequelae of untreated infection are prevented. They point out that evidence is limited for the probabilities of sequelae of untreated infection used in CEA modelling. A second issue revolves around diagnostic testing. Chlamydia screening services have expanded as a result of the introduction of non-invasive nucleic acid amplification testing (NAAT). However, we do not know whether the natural history of NAAT detected infections is the same as culture detected infections. NAATs are 30–40% more sensitive than culture for detecting chlamydia,[2 3] and it is unknown whether NAAT positive/culture negative infections are as likely to progress to pelvic inflammatory disease (PID). Citing results by Scholes *et al*,[4] Honey *et al* urge the conduct of further clinical trials to improve the accuracy and strength of evidence of the morbidity assumptions involved in CEA of chlamydia screening. The accuracy of this information is essential, as the probability of PID subsequent to untreated infection is central to the results and conclusions of a chlamydia screening cost effectiveness analysis. For example, Scholes's analysis at the Seattle managed care organisation, which demonstrated that enhanced chlamydia screening reduced PID incidence, used